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A New Design for Survey Feedback

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Abstract

Survey feedback is a social technology without much theory to offer alternative design strategies or to explain why it works when it does. The present study presents a theoretical discussion analyzing and explaining the use of group methods in feeding back diagnostic data to organizations. A new design —the peer group-intergroup model— is presented and compared to the traditional family group model. Data evaluating one implementation of this design showed that it was associated with senior officers of a bank changing their attitudes toward the relevance of a diagnostic study and their willingness to consider changing their own behavior. Changes in organizational practice also followed the feedback. An explanatory model for the new design, derived from the general theoretical considerations, was supported by data taken from the feedback sessions.

Survey feedback is one of the more important social technologies used in applying behavioral science research results to organizational problems (Mann, 1957; Neff, 1965; Schmuck and Miles, 1971). There are now a number of reports in the literature to show that under some circumstances survey feedback can be an important tool in effecting constructive social change. Mann (1957), Brown (1971), and Bowers (1971) reported substantial and significant attitude changes as a result of feeding back the results of attitude surveys. But it also has been shown that feedback of data does not always lead to predictable or positive attitude changes. Chesler and Flanders (1967) reported a high degree of ambivalence that nearly undermined their feedback attempt, and Miles et al (1969) found that what seemed to be an effective and constructive feedback effort did not produce substantial attitude changes.

As applied behavioral science has grown rapidly during the last twenty years, there has been a tendency for technological advances to move along more rapidly than either empirical evaluation of the techniques or theoretical understanding of the processes which could explain why the techniques work when they do (Alderfer, 1971a). It is one thing to have a technique, such as survey feedback, which one knows will "work" under some circumstances, and it is quite another thing to have a technology which, on the basis of reasoned theoretical arguments, can be modified to be maximally effective under a given set of circumstances.

The purpose of this paper is fourfold: (1) to offer a theoretical framework from which alternative designs for survey feedback can be derived; (2) to describe one such alternative design and show how it was

implemented in an organizational setting; (3) to present data evaluating the impact of the feedback design; and (4) to propose and test a preliminary model which purports to explain why the design worked as it did and points to directions for specific kinds of interventions by change agents during feedback.

DESIGN AND THEORETICAL ISSUES

The usual practice in survey feedback is to provide data to "family" groups (Mann, 1957; Schmuck and Miles, 1971). A family group consists of a superior and his immediate subordinates. These people meet to understand the data, discuss its implications, and plan action steps.

A family group design has a set of advantages and disadvantages that depend heavily on the relationship of the superior to the group. If he is able to encourage the group to talk openly, then having the family group together increases the likelihood of having the data understood fully and utilized quickly and effectively. However, if the superior and the group members are unable to talk about their common problems then the family group may become quite dysfunctional as a feedback agent.

Problems with the Family Group Design

There are two primary styles that a superior may follow if he intentionally or unintentionally discourages group work on issues raised by the data.

First, he may give signals that he will take punitive action against individuals based on what he learns from the data. Members who perceive such messages will be reluctant to talk directly about difficult issues.

They may fear that the boss will punish them if they say or imply that his behavior is part of the problem. They may be reluctant to accept responsibility for their own contributions to the difficulties or to raise questions with their peers if they expect the boss to use this information against group members.

Second, he may act as if he himself will be badly hurt if the members say or imply that he is a partial cause of their problems. Such a stance by a boss may evoke guilt from subordinates and lead them to be reluctant to say things which conceivably could have a destructive impact on their superior. As a result important elements of problems may not be discussed.

Perhaps the ideal stance for a superior to take in a survey feedback setting is to indicate that he hopes the group will feel free to discuss all of the important issues; that he personally is interested in solving problems, not in punishing people; and that he expects to examine the impact of his own behavior and is willing to tolerate whatever discomfort this may involve. If the family group already has established a reasonably high level of trust the boss will be able to make such statements and be believed. But if the group is unsophisticated in its development, the boss will probably be unlikely to say such things naturally. And even if he does group members may be unable to understand or believe him.

In addition to the role of the boss' behavior in preventing full exploration of the data, choices by subordinates may also have a similar effect. Even if the superior takes the initiative and asks for feedback on his behavior, the subordinates may decide not to respond to this request with useful information. They may say that their working

relationships are going well and that they are not aware of any problems. In this way they imply that there is no need for feedback. They may also say that they doubt the boss' ability not to hold negative feedback against them. Such a stance, of course, implies lack of trust in the boss. Subordinates may ask the boss if he is sure that he will not hold an angry reaction against someone. If the boss says he is sure the employee may respond (perhaps privately) that being human no one can be sure, and therefore the boss is deceiving himself and/or the group. If the boss says that he will do his best not to misuse information that he gets, the employees may take this kind of tentativeness as further evidence that it is not safe to be direct. Afterall the boss is not completely sure that harm will be avoided. In short the family group can quite naturally develop collusive norms, initiated by either superior or subordinates (or both) which have the effect of inhibiting valid exchange of information.

Theoretical Issues

The search for an alternative to family group survey feedback was prompted by these deficiencies and by a more general set of theoretical considerations (Alderfer, 1971a). Individuals, groups, and larger social units can be conceptualized as open systems whose organization is in part determined by the nature of the psychological boundaries that help to define their existence. The boundary of a system serves to distinguish the inside from the outside. Systems may suffer from two classes of boundary pathology. On the one hand boundaries may be so ill defined as to be nonexistent; in this case disorganization threatens the internal

structure. On the other hand, boundaries may be so impermeable as to prevent a system from interacting with its environment; in this case the system suffers from stagnation. These two types of pathology serve to identify two very important qualities of boundaries-their strength and their permeability. Strong boundaries act against disorganization while permeable boundaries maintain the interaction of a system and its environment.

Boundary conditions tend to maintain a stable or quasi-stationary equilibrium, but they also change in response to changes in a system's external environment. One way to conceptualize the use of group methods in survey feedback - regardless of whether the group is a family group or some other type of group - is to view the group methodology as a way of altering the external environment of individuals so they might become more open to feedback.

Theoretical and empirical arguments are available to support the proposition that there tends to be a parallelism between the external boundaries of a system and the boundaries among the parts of a system (Alderfer, 1971a). If the internal boundaries of a system are highly impermeable then the external boundaries tend to be the same. A specific application of this theoretical position to the family group model for survey feedback would state that if the boundary between the authority figure in the group and the rest of the group is highly impermeable then the external group boundary will tend to inhibit the input and exploration of data from survey feedback. A practical derivation from this position would involve taking a superior out of the group in order to increase

the permeability of the external group boundaries.

Boundary conditions are closely related to the nature of the human relationships within and between systems. Strong permeable boundaries tend to be associated mutual relationships, while rigid closed boundaries or no boundaries at all tend to be associated with non-mutual relationships. A human relationship (between persons or groups) is defined as possessing mutuality to the degree that all ideas and feelings relevant to the parties are both given and received (Alderfer, 1971a).

The connection between boundary and relationship conditions offers yet another way to increase the receptiveness of a group to feedback from outside. To the extent that mutuality among group members can be increased, the group should become more open to feedback. One way to increase the likelihood of group members attaining mutuality is to bring together people who have common interests without a history of unresolved conflicts. Members of an organization who have similar organizational positions without common superiors tend to meet such criteria.

If it aids free flow of information and exploration of implications to take the superior out of a group, this strategy also runs the danger of undermining the possibility of having effective action follow from the feedback. To get action the need for change must be perceived by those who have the authority to alter significant organizational practices. Consequently a new design for feedback can't just take the superior out of a group; it must also bring those with authority into interaction with those of lower hierarchical status around subjects raised by feedback.

A New Design

The new design for survey feedback is called the peer group-intergroup model to distinguish it from the family group model. The peer groups are composed from individuals who share common organizational fates but do not have direct authority relationships with each other. Discussions arising from this kind of group allow the organizational problems shared by persons holding common roles to be identified and clarified. Intergroup discussions then occur after the peer gooups have done their work. Several key authority figures join each peer group after they have met initially without authority figures. The "intergroup" phase, therefore, consists of interaction between members of the systems at different levels of authority.

Prior to joining the intergroup discussions, the authority figures have had their own opportunity to meet in a group to discuss the findings. They come to the intergroup meeting fully informed about the study results and prepared to get the perspectives of people from different parts of the organization. During the intergroup phase of the meetings the two groups discuss their reactions to the study, raise questions with each other, and compare interpretations of the findings. Both meetings are attended by a consultant. During the peer group meeting the consultant has a dual role: he acts as a technical consultant on the study procedures, data analysis, etc., and he also acts as a process consultant to the group aiding in whatever way he can the development of mutuality among members. During the intergroup phase the consultant acts primarily in a process mode to facilitate the development of mutuality across group boundaries.

Whenever two groups are brought together to discuss common problems

on which each group has a different perspective there is some danger that destructive intergroup conflict will ensue. According to the theory of boundaries and relationships there tends to be a parallelism between the internal and external relationships of a group. As a result, groups that tend to have mutual relations among members are more likely to establish mutual relations between groups than are groups that tend not to have mutual relations among members. Thus, to the extent that activities prior to bringing the peer and authority groups together have facilitated the development of mutuality within the groups, the intergroup encounter should be characterized by mutuality between groups. However, to the extent that events prior to the intergroup meeting have decreased intragroup mutuality then the intergroup meeting should be characterized by lack of mutuality between groups.

The consultant acts in several ways to aid the development of mutuality during the execution of this design. In the composition of the common fate groups he suggests that individuals who have a history of effective working relationships be grouped together. During the initial group discussions he encourages individuals to speak their opinions and to listen to others in the group who may have differing views. He attempts to establish a norm that the group does not have to reach a common agreement on issues, but rather may use the upcoming intergroup meeting as an opportunity to test out differing interpretations and to obtain more information from people who have different perspectives. When the intergroup meeting happens the consultant adopts a similar stance, trying to facilitate bringing the relevant data to bear in the most open way possible.

Implementation of the Peer Group-Intergroup Model

A specific application of the peer group-intergroup model for survey feedback was employed in feeding back the results of an organizational diagnosis carried out in a medium sized bank of approximately 700 employees located in a New England city. To prepare the feedback an extensive series of interviews with employees throughout the organization were conducted, and questionnaires were distributed to individuals separately and in group meetings. The data from each of these sources were analyzed and brought together in two reports. One of these focussed on general attitude and morale conditions throughout the bank, and the other was a more specialized report dealing with the management development program (Alderfer, 1971b).[1]

After data collection had proceeded during the fall and winter, an initial preview of the study results was prepared for the senior officers in the spring. This session focussed primarily on the results from the management development study and served primarily to maintain the investigator's contact with the management of the on-going system. It also provided an opportunity to collect "base-line" data on the Senior Officers attitudes toward survey feedback and its utilization.

[1]Perhaps it should be noted that this procedure itself of preparing a written report in addition to giving summaries of attitude scale results may represent a departure from the approach to survey feedback employed by Mann (1957), Bowers (1971), and Miles (1971).

When the analysis of the feedback had been completed the senior officers, together with the President, met to discuss the diagnostic reports in detail. These meetings, of course, did not take the peer group-intergroup model, but were carried out in the family group format. The executives literally went over the report on a line-by-line basis, asking questions of themselves and of the consultant. They gave four full afternoons during the summer of 1969 to this process. These were not easy sessions. There was no doubt that the men wanted very much to learn from the study, yet they had a great deal of difficulty discussing issues that involved conflict and controversy. They seemed ill-at-ease with discussions of their own behavior as it might affect the rest of the system, and were well aware of the possibility that important kinds of data may have been denied them by their subordinates. In fact, some of the executives wondered if the researcher might have exaggerated the kind and/or the degree of human problems that existed in the organization.

This issue served as the impetus to design the peer group-intergroup feedback meetings. The investigator indicated that he did not believe that he had overstated the degree of human problems that existed in the bank, but he could not be sure. Perhaps the employees had used the interviews and questionnaires as opportunities to "bitch" excessively. Perhaps the comments obtained by the research vehicles were unrepresentative of their general feelings about working for the bank. How could next steps be designed to get more data to answer these questions more fully?

It might also be noted that the difficulties of this top executive group were used as a predictor of what other family group meetings

might be like. Among the top executives several men seemed ready and able to give feedback and listen to others, but some seemed unable to respond to data in these ways. The consultant's views of these problems included both intrapersonal and interpersonal factors. Some men did not seem as though they were personally ready to talk openly about controversial and conflictful issues, and some relationships among the executives were sufficiently non-mutual that it was often quite difficult for various men to explore issues in much depth without polarizing matters or withdrawing from the discussion.

As the consultant and executives problem-solved on ways to deal with the problems of verifying the diagnostic data, the peer group-intergroup model emerged.

To begin the design, the consultant made a verbal presentation of the diagnostic results to a full meeting of the bank's officers meeting. There was a question and answer period following the presentation, and then an invitation for those who wanted to undertake further exploration was made. Officers who wanted to read the reports could obtain them through the Personnel Vice President. Anyone asking to read the reports, however, was also asked to attend a group meeting to discuss his impressions of the findings with others in the organization. The consultant explained that since there was a considerable amount of controversial material in the reports there was some danger that individuals might selectively use the material to reinforce their prejudices, if they read the reports without discussion. The group meetings might serve as a way to test alternative interpretations for the same facts. In addition, he mentioned

that the Senior Officers had expressed doubts about some conclusions and were anxious to hear more from the managers themselves without relying on the investigator as an exclusive communication link for organizational problems.

Eleven peer groups of managers were formed by the Personnel Vice President with the advice of the consultant. The operational criteria for forming these groups were two: to aid in the formation of valid group boundaries, and to enhance the development of mutual relations among the group members. To help in the formation of group boundaries the consultant asked the Personnel Vice President to put people together who shared common organizational fates but did not have reporting relationships to each other.

These criteria led to the formation of five classes of groups: (1) trainees, who were graduates of the bank's special management development program; (2) branch managers, the men who ran the bank's branch offices, of which there were seventeen at the time of the study; (3) middle managers from the main office; (4) upper middle managers from the main office, the men who reported directly to the senior officers; and (5) officers of the employees association, the bank's group who served the role of a union. There were two groups of 6-9 people from each of these sets. In addition, an eleventh group was also formed. This group included individuals without authority relationships and without common organizational fates.

In composing the groups within each common fate set, the Vice President was asked to use his knowledge of the peoples working relationships to

put together individuals who would be inclined to talk easily and openly with each other. The consultant's previous experience showed that the Vice President was quite alert to how various organization members related with each other, and thus put considerable trust in his judgement.

The peer group phase of the discussions usually lasted 90 minutes, and then one of the Senior Officers and the Personnel Vice President joined the group for the intergroup discussions. The combined sessions usually took the entire morning and were done one per week over a period of eleven weeks. Figure 1 summarizes the whole flow of the feedback processes.

Insert Figure 1 about here

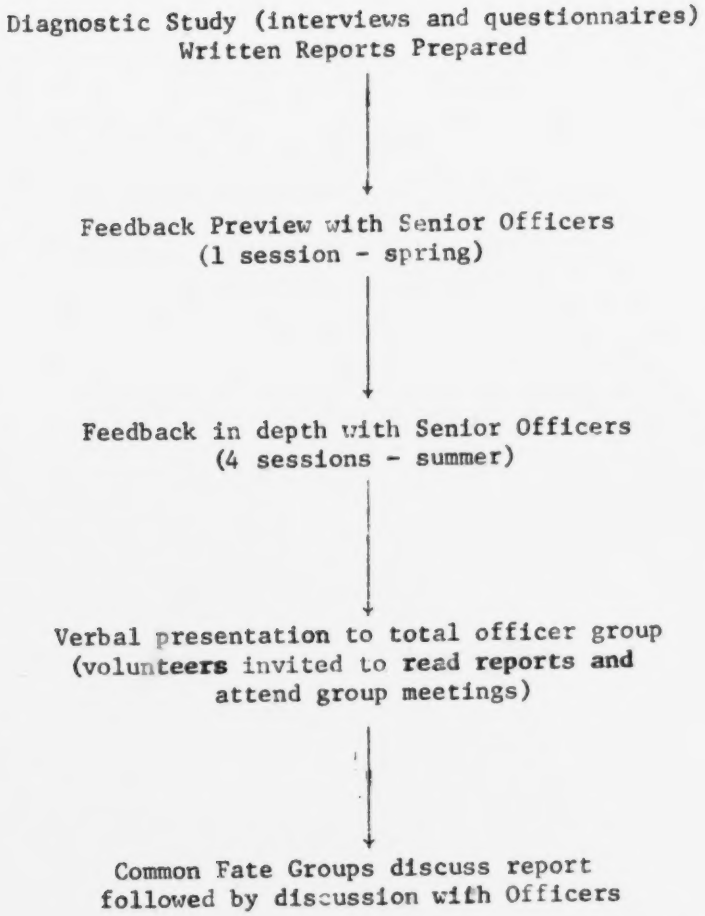
RESEARCH PROCEDURES

This study had two purposes, one evaluative and the other explanatory. The evaluative purpose was to see how effective the peer group-intergroup design was for implementing survey feedback. The explanatory aim was to begin the process of developing some ways to understand why the design unfolded as it did. Different methods were used for each of these ends, but the basic data were derived from behavior coding of the feedback sessions and attitude questionnaires given to participants at the end of the peer group-intergroup meetings.

Behavior Coding

Each feedback session was tape recorded and transcribed verbatim. From the type scripts two classes of behavior were coded; "content" behaviors and "process" behaviors. A unit for coding was established whenever a person talked. The coder made a judgement about the content

Figure 1. FLOW OF FEEDBACK PROCESS


Diagnostic Study (interviews and questionnaires)
Written Reports Prepared
Feedback Preview with Senior Officers
(1 session - spring)
Feedback in depth with Senior Officers
(4 sessions - summer)
Verbal presentation to total officer group
(volunteers invited to read reports and
attend group meetings)
Common Fate Groups discuss report
followed by discussion with Officers

of his complete assertion and about the processes he reflected when he spoke. Each unit of behavior was coded for content and process.

The content categories for this material were derived inductively by Holbrook who scanned transcripts from all of the groups to develop a list of 21 categories intended to cover most of the subjects discussed during the feedback meetings. These categories and their operational definitions are shown in Figure 2.

Insert Figure 2 about here

Two process categories, openness and here-and-now, were employed in this study in the same way that they were by Alderfer and Lodahl (1971). Both openness and here-and-now behavior operationalize elements of a mutual relationship. Low openness is characterized by harsh assertions of single ways to view reality, while high openness represents an attempt to search for many possible meanings and interpretations. Here-and-now behavior reflects the degree to which people are discussing things in ways that are immediately relevant to them, as compared to choosing distant symbolic equivalents to their own issues. Each behavioral unit was assigned to one of the content categories and their operational definitions are shown in Figure 3.

Insert Figure 3 about here

Attitude Measures

Figure 4 contains sample attitude items for the scales employed in the study. At the individual level of analysis it was desirable to obtain a measure of the degree to which a person perceived himself

Figure 2. CONTENT CATEGORIES

Agenda:	how to proceed; what do we do now; how will this group proceed
Communication:	difficulty or ease in communication, lack of communication, secrecy
Conflict:	expression of hostility directly or indirectly
Control:	who makes decisions, whose decisions carry weight, why "we" don't have authority
Report:	preparation; presentation; or meaning of written report
Career:	getting ahead; some people move faster than others
Recruitment:	people entering the system; who gets hired and why
Evaluation:	does a person pull his weight; is he deadwood; does the bank tolerate non-contributors
Pay:	who gets raises, how often, and whether they deserve them
Feedback:	whether people get information about themselves
Training:	any training except the management development program
Leaving:	people who have left, who would like to leave, who threaten to leave, who are afraid to leave
Polarization:	intergroup conflict or cliquishness
Orientation:	management development program
"Right types"	certain "types" do best in the bank; what is the type
Bad subordinates:	how middle managers handle "lazy" tellers
Sensitivity training:	what is this program; is it good; is it good for the bank
Seniority:	how do younger and older employees relate
Ivy League type:	what is an ivy league graduate; are they more sought after; do they get ahead more readily
Motivation:	employees enthusiasm for work. why some work and others do not; how to motivate people to work
Previous report:	Argyris' earlier study of the bank

Figure 3. PROCESS BEHAVIOR CODES

OPENNESS	5:	Respondent questions self or others completely open-endedly.
	4:	Respondent questions self or others with fixed alternative answers.
	3:	Respondent owns opinion, attitude, or belief.
	2:	Respondent states or implies that there is a single right answer.
	1:	Respondent shows antagonism to others' views.
HERE AND NOW	5:	Conversation pertains to present group members in current meeting.
	4:	Conversation pertains to present group acting at another time.
	3:	Conversation about others in the organization.
	2:	Conversation about similar organizations with similar problems.
	1:	None of the above.

as generally ready to give and receive feedback. The primary dependent variables in terms of evaluating this feedback attempt were of two classes--one pertaining to the merits and utility of the study done for the organization and the other pertaining to the relevance and readiness for change shown by individuals as a result of being exposed to the feedback processes.

Insert Figure 4 about here

RESULTS

Evaluation Data

At the core of systems theory is the concept of steady states, those sets of conditions which tend to be stable. The theory of boundaries and relationships argues that there is a tendency for certain boundary conditions to coexist with certain relationship conditions (Alderfer, 1971a). Relationships of mutuality tend to support strong boundaries that are also permeable, while non-mutual relationships tend to be associated with rigid, non permeable boundaries or with non existent boundaries.

Applying this logic to individuals facing diagnostic feedback on organizational conditions leads to somewhat paradoxical predictions. Those individuals who tend to establish relationships of mutuality -- and who, therefore, are more likely to obtain feedback on organizational conditions from inside the system -- will be more likely to respond positively to feedback from outside the system than those who tend not to establish relationships of mutuality. That is, those who are most in need of feedback will tend not to receive it and those most likely to receive it without outside intervention are most likely to attend to it when there is outside intervention. "Feedbackwise," the "rich" tend

Figure 4. SAMPLE ITEMS FOR SELF PERCEPTION AND STUDY ATTITUDE SCALES

Self Perception

Give Feedback:	If conflict is present I prefer to deal with it directly.
Accept Feedback:	I am willing to tolerate some personal discomfort in order to increase my self awareness.

Study Attitudes

Readable:	The report was written in a way that I could easily read and understand.
Positive Evaluation:	The study was a waste of time. (reverse scored)
Relevance:	I think that the study results are not relevant for me. (reverse scored)
Ready to Change:	I think that I would be ready to attempt changes in my work behavior as a result of the study findings.

to get "richer", while the "poor" remain "poorer".

The present study provided an opportunity to test this logic empirically. Correlations between a persons perceptions of himself as a giver and receiver of feedback and his reactions to the organizational diagnosis were computed. Table 1 shows these results. Individuals who saw themselves inclined to give feedback saw the report more readable and gave the study a higher evaluation than individuals who were not inclined to give feedback. Those inclined to give feedback were also more inclined to see the relevance of the study for themselves than those who did not give feedback.

The tendency to accept feedback was also associated with reactions to the study as one might expect. This self perception was significantly related to each of the four indices of reaction to the study. In short these data support the idea that those individuals inclined toward exchanging feedback are likely to take a similar stance toward presentation of the diagnostic results.

Insert Table 1 about here

In speaking about the use of group methods in effecting change one must identify the change target. For the present study the initial efforts were directed toward the Senior Officers. These men commissioned the study; they received the first feedback; and it was they who had the power to legitimize further activities in the bank. Their attitudes toward the study and its relevance to their own behavior would determine what (if anything) would follow after the feedback.

Table 1. CORRELATIONS BETWEEN SELF PERCEPTIONS ABOUT FEEDBACK AND REACTIONS TO DIAGNOSTIC STUDY (n=102)

	Give Feedback	Accept Feedback
Readable	.21*	.28**
Positive Evaluation	.21*	.48**
Relevance	.17*	.30**
Ready to Change	.07	.21*

* $p < .05$

** $p < .01$

Table 2 shows a time series plot of their attitudes toward the study, toward its relevance to their own behavior, and toward their willingness to change as a function of the results. There were no significant changes in the executives perception of the reports' readability or in their overall evaluation of the study. Both of these scores were quite high at the outset and remained that way over time. (The scale range on each measure ranged from -5 to +5.) There were significant and persistent increases in perceived relevance and readiness to change as a function of time, however. (Repeated measures F tests with 2 and 12 d.f. gave values of 8.11 and 6.74, respectively.)

Certain cautions need to be raised about these results because there was no control group who received only the instruments without engaging in the feedback discussions. One does not readily find another top group of bank executives to serve as a control group in a study such as this. But the idea that real changes came as a result of the feedback receives further support because of other related new events in the bank that occurred subsequent to the completion of the feedback sessions and for which the feedback sessions were a stimulus. The top executive group decided to take part in a management by objectives program. They commissioned a redesign of the management development program to help reduce its perceived exclusiveness from the rest of the system, and they brought in a series of seminars on managerial psychology for officers of the bank. At the same time they decided not to undertake laboratory education, a possibility suggested by the researcher.

These organizational changes do not unequivocally establish the

feedback sessions as the causal agent, but they do strengthen the case that the feedback processes affected both the attitudes and behavior of the top management group. They took action on some of the major topics addressed by the report, and they invested themselves in these programs as well as making them available for others.

Insert Table 2 about here

Explanatory Data

The relationship between the use of the peer group-intergroup design and changed attitudes and behaviors is one of input to output. Theoretical arguments were offered to lead one to expect positive results from this new design. Nevertheless, the confidence one has in the input-output links increases if one can identify intervening processes that tie the use of this design to the observed outcomes. Two useful intervening constructs are content of what people discuss and the process by which they discuss it. At the level of content the consultant wishes to enable the participants to discuss the issues and problems they have. At the level of process he wants the discussions to enable people to express their opinions and listen to all relevant matters.

The content of the group's organizational life-their shared problems and concerns helps bind the members together. By forming groups around around common problems the consultant hopes that group boundaries will form more readily as a result of the members becoming more aware of their reasons for "grouping." Thus the term content in the explanatory model parallels the term boundary in the general systems model. In a similar

Table 2. OUTCOMES OF FEEDBACK PROCESSES

A. Attitude Changes Among Senior Officers (n=7)

	Spring	Summer	Fall	p.	Direction of change
Readable	3.43	2.57	3.57	n.s.	
Positive Evaluation	3.52	4.00	4.15	n.s.	
Relevance	1.00	3.00	3.58	.01	more relevant
Ready to Change	.56	2.28	3.14	.02	more ready to change

B. Structural Changes

1. Management by objectives program
2. Redesign of management development program
3. Managerial psychology seminar for managers

way the term process parallels the term relationship. The consultant asked that among those who had common organizational fates, groups be formed of those who had productive working relationships whenever possible. When the groups were meeting the consultant intervened to aid the process in becoming more open and more here and now and thus to increase the mutuality of the relationships among group members by these tactics. Interventions to increase openness, for example, would include such statements as: "We need not agree on a single view on these matters. Do others have different opinions?" To facilitate here and now behavior one might say: "Do you have a personal example of that? Does that pertain to people in this room? Is what just happened between the two of you an example of what you were explaining?"

Group Composition to Content Link. By composing groups around common organizational fates the consultant is placing primary leverage initially on content as a facilitator of productive discussions. When the groups came together they had read the diagnostic reports about the organization. To further facilitate the formation of group boundaries around content issue the consultant asked group members to submit the questions they wished to discuss in advance of the group meeting. By using the written report as a stimulus the consultant allowed the members to choose what they wanted to address in the meetings. The meetings opened with the consultant reading aloud and categorizing the questions that the members wished to discuss. He asked the group to establish their order of priorities for taking up the subjects. All of this was intended to help the groups formulate their work agenda.

If group composition does affect the content of the discussions one would expect to find the various types of groupings to devote different amounts of time to the various topics of the feedback Table 3 contains the average number of transcript lines devoted to particular topics by the various common fate groups. This analysis makes use of two types of comparison (or "control") groups. One such group, labeled "mixed" in Table 3, was made up of members from the common fate groups who did not attend their original sessions. This group represents a "diagonal slice" from the organization; members of the group did not have direct authority relations with each other, nor did they share common fates. The second comparison group consisted of two organizational behavior classes who had read the feedback reports, but who were obviously not members of the organization. These people had common fates but were outside the diagnosed system. Group composition was significantly related to the length of time devoted to various topics.

It is interesting to observe which topics tended to be predominant in the various groups. The senior officers devoted most of their discussion to problems of communication, conflict, evaluation, agenda setting, and motivating people. These men worried about being cut off from the rest of the organization and looked for ways to motivate and evaluate others in the system more effectively. The management trainees, on the hand, seemed primarily concerned about communication, conflict, and careers. Located away from the main office, the branch managers primarily discussed problems of authority and control, communication, and conflict. They frequently felt autonomous and yet powerless. Observation of the

distribution of topics among the middle managers shows fewer clear cut concentrations for this group than for others. Their most frequent subject was recruitment followed by communications. The upper middle managers, those men reporting to the Senior Officers, focussed primarily on communication and conflict. Among the Employees Association the primary concerns were with careers, pay, communication, and agenda setting. The mixed group did not show any major concentration of interest in their discussion. Perhaps most noteworthy is that they gave proportionately less attention to topics of known general interest (e.g., communication) than the common fate groups from which they were composed. Finally the professional interests of the classes were reflected in their most frequent topics of conversation-setting the agenda, recruitment, and the makeup of the diagnostic report.

Insert Table 3 about here

Content to Process Link. Once a group had set its work agenda in terms of content, the consultant's task shifted to how people talked about the various topics. It would be expected that topics would vary in the kind of process behavior that they would evoke. Some issues were more controversial than others and thus would be discussed with higher emotion; these subjects might be discussed more dogmatically than others. Other topics might be more threatening than others and would be discussed in a more flightful manner.

The data contained in Table 4 pertains to the second link in the explanatory model and shows that the various topics tended to be

Table 3. LENGTH OF DISCUSSION OF FEEDBACK TOPICS AS A FUNCTION OF GROUP COMPOSITION*

	SENIOR OFFICERS	TRAINEES	BRANCH MANAGERS	MIDDLE MANAGERS	UPPER MIDDLE MANAGERS	EMPLOYEES ASSOCIATION	MIXED GROUP	O.D. CLASSES
AGENDA	145 [a] (13)	88 (09)	54 (05)	84 (08)	71 (07)	136 (14)	32 (03)	475 (17)
COMMUNICATION	287 (26)	222 (23)	124 (12)	115 (11)	198 (21)	122 (13)	104 (08)	240 (09)
CONFLICT	164 (15)	115 (12)	119 (12)	81 (08)	160 (17)	38 (04)	140 (11)	310 (11)
CONTROL	20 (02)	93 (10)	242 (23)	60 (06)	70 (07)	44 (05)	104 (08)	44 (16)
REPORT	56 (05)	71 (07)	13 (01)	95 (09)	23 (02)	45 (05)	83 (07)	405 (15)
CAREERS	7 (01)	126 (13)	113 (11)	82 (08)	36 (04)	200 (21)	142 (12)	159 (06)
RECRUITMENT	0	34 (4)	1 (01)	142 (14)	82 ( )	70 (07)	95 (08)	349 (13)
EVALUATION	168 (15)	60 (06)	39 (04)	65 (06)	34 (04)	26 (03)	79 (06)	69 (02)
PAY	12 (01)	0	44 (04)	119 (11)	20 (02)	119 (13)	104 (08)	14 (01)

[a] The top number in each cell gives the number of transcript lines devoted to a particular topic by a given group (or groups) and the bottom number in the cell gives the percentage of lines given to a topic by the group

* χ^2 (df = 140) = 5625.20, $p < .001$

Table 3. Continued

	SENIOR OFFICERS	TRAINEES	BRANCH MANAGERS	MIDDLE MANAGERS	UPPER MIDDLE MANAGERS	EMPLOYEES ASSOCIATION	MIXED GROUP	O.B. CLASSES
FEEDBACK	45 (04)	16 (02)	93 (09)	12 (01)	20 (02)	25 (03)	54 (04)	245 (09)
TRAINING	30 (03)	0	0	43 (04)	83 (09)	20 (02)	143 (12)	22 (01)
LEAVING	0	6 (01)	26 (02)	4 (0)	10 (01)	48 (05)	38 (03)	81 (03)
POLARIZATION	17 (02)	26 (03)	72 (07)	15 (01)	30 (03)	0	54 (04)	15 (01)
ORIENTATION	0	18 (02)	10 (01)	30 (03)	22 (02)	0	4 ( )	28 (01)
MAKING WAVES	0	21 (02)	20 (02)	9 (1)	55 (06)	0	0	23 (01)
BAD SUBORDINATES	0	0	36 (03)	27 (02)	2 (0)	6 (1)	2 (0)	0
SENIORITY	0	0	0	29 (03)	12 (01)	5 (01)	6 (0)	36 (01)
SENSITIVITY TRAINING	30 (03)	22 (02)	15 (01)	8 (01)	33 (03)	0	11 (01)	24 (01)
IVY LEAGUE TYPE	0	2 (0)	0	10 (01)	0	0	32 (03)	83 (03)
MOTIVATION	132 (12)	32 (03)	0	9 (01)	0	32 (03)	0	0
PREVIOUS REPORT	9 (01)	0	0	0	0	0	0	146 (6)

discussed most openly were ivy league types, agenda setting for the meeting, the design and makeup of the report, recruitment, and sensitivity training, while the subjects discussed least openly were pay, training, motivation, careers, evaluation, and bad subordinates. Three of the five most open topics (agenda, the report, and sensitivity training) were subjects introduced by the diagnostic study. All of the least open topics pertained to facets of evaluation. One might conclude that the participants were able to be most exploratory about new subjects introduced by the study, and they were most closed about hierarchial concerns in the system. The five items that had the highest here-and-now scores were the agenda, communications, ivy league types, feedback, and evaluation; while the subjects that tended to be least here-and-now oriented were seniority, bad subordinates, the right type, the orientation program, and sensitivity training. Issues pertinent to the agenda of the meeting received high scores on both openness and here-and-now behavior, while the topic of bad subordinates received low scores on both scales.

Negotiating about the agenda of the meeting was a topic initiated by the consultant and apparently served as a model for optimal process behavior during the feedback sessions. It is likely that the subject of bad subordinates served the classical scapegoat function for the groups. When this topic occurred people who were not present were discussed in relatively disparaging ways.

Insert Table 4 about here

Table 4. PROCESS BEHAVIORS AS A FUNCTION OF CONTENT CATEGORIES

	Mean Openness *	Mean Here-and-now **
AGENDA	3.48	4.40
LACK OF COMMUNICATION	2.88	3.83
CONFLICT	2.95	3.41
AUTHORITY, CONTROL	2.83	3.44
RESEARCHER'S REPORT	3.28	3.50
CAREER ADVANCEMENT	2.55	3.31
RECRUITMENT, HIRING	3.03	3.14
EVALUATION OF PERFORMANCE	2.46	3.53
CAREER-PAY	2.64	3.28
FEEDBACK	2.81	3.60
TRAINING	2.63	3.36
QUITTING, BEING FIRED	2.96	3.23
POLARIZATION	2.80	3.36
ORIENTATION PROGRAM	2.77	2.94
RIGHT TYPE	2.87	3.06
BAD SUBORDINATES	2.33	3.00
SENSITIVITY TRAINING	3.00	2.54
SENIORITY	2.90	3.00
IVY LEAGUE TYPE	3.50	3.62
MOTIVATION	2.62	3.50
PREVIOUS RESEARCH REPORT	2.75	3.37

*Openness $F(20,1009) = 4.84$, $p<.001$

**Here-and-now $F(20,1009) = 9.31$, $p<.001$

A Derivation. A logical consequence of the explanatory model is that process behavior would become a function of group composition. Table 6 shows this proposition to be supported very significantly. Some interesting observations can be made from these data. The management trainees had the highest process scores on both openness and here-and-now behavior. Both the senior officers and the branch managers showed a pattern of being here-and-now oriented but in a closed manner. The mixed group was very low in here-and-now behavior and moderately low in openness behavior. As one might expect the O.B. classes were lowest in here-and-now behavior, afterall, they were not members of the system. But this group was relatively high on openness, which is what one would expect from an intellectually curious and detached group.

Insert Table 5 about here

Process to Attitudes Link. The final step in the explanatory argument connects the process behavior that occurs during the peer group and intergroup meetings to the attitudes toward the diagnosis that are measured at the end of the session. Research by Alderfer and Lodahl (1971) has demonstrated such a causal connection during experiential learning. While the feedback discussion groups were of course less intense than Tgroups, they partook of the same basic elements.

Data relevant to this last step is shown in Table 6. Behavior scores from the first and second parts of the meeting were both correlated with attitude measures taken at the end of the meeting.

Table 5. PROCESS BEHAVIOR AS A FUNCTION OF GROUP COMPOSITION

	Mean Openness*	Mean Here-and-now**
Senior Officers	2.56	3.75
Trainees	3.25	3.91
Branch Managers	2.74	3.62
Middle Managers	3.09	3.57
Upper Middle Managers	2.97	3.43
Employees Association	2.79	3.59
Mixed Group	2.75	3.38
O.B. Classes	2.97	3.23

*Openness $F(7,1065) = 5.24$, $p<.001$

**Here-and-now $F(7,1065) = 5.93$, $p<.001$

Correlations shown in the table were computed from group means, on both the behavior and attitude scales. Openness behavior in the peer sessions was significantly related to seeing the report as readable, while openness in the intergroup sessions was significantly related to seeing the study as worthwhile. Here-and-now behavior in the peer sessions was significantly related to perceiving the relevance of the study to one's behavior.

Insert Table 6 about here

DISCUSSION

Methodological Issues

The peer group-intergroup model for survey feedback was presented as an alternative to the more common practice of feeding data back to family groups. In this study the design was implemented and was associated with changes in top management attitudes toward the diagnostic study and actual changes in organizational practices. The practical value of the design, therefore, seems plausible. The fact that the design "worked" also provides support for the theoretical arguments on which it is based.

The empirical arguments used to evaluate and explain the design are not flawless, and certain words of caution should be raised at various points. When the correlations between self perceptions and reactions to the diagnostic study turned out as predicted the results were interpretted as supporting the tendency for boundary and relationship conditions to be self reinforcing in individuals. While these data were taken from distinct parts of the questionnaire, there remains

Table 6. CORRELATIONS BETWEEN GROUP BEHAVIOR AND ATTITUDES TOWARD STUDY (n=11)

A. During Common Fate Groups

Attitudes	Behavior	
	Openness	Here & Now
Readable	.61*	.00
Positive Evaluation	.04	.24
Relevance	.19	.71**
Ready to Change	-.01	.38

B. During Mixed Hierarchy Intergroups

	Openness	Here & Now
Readable	-.11	-.28
Positive Evaluation	.64**	.14
Relevance	-.02	-.14
Ready to Change	-.37	.19

*p<.02
**p<.01

the possibility that some respondents had identified the "right" answers in both sections and produced correlated answers as a result. Even if a response set was operating it is not at all clear that it invalidates the basic finding. The respondents were not told about the theoretical basis of the feedback procedures at anytime, so if some learned the "right" answers it came as a result of their experience in the feedback sessions, not as a result of being told by the consultant.

It was mentioned earlier that there was no feasible control group to use in comparison to the top executive group. As a result one is not in a rigorous position to rule out alternative explanations for the changes associated with the feedback. Perhaps the strongest case for the feedback's impact comes from the fact that the organization had all of the data prior to the diagnostic study, and had not acted to make changes. They had even undertaken their own study of the management development program--a fact that the consultant discovered only during the feedback sessions. It does not seem unreasonable to attribute some causality ot the feedback processes as an agent of change.

The link from process behavior to attitudes is supported by three significant correlations out of a possible sixteen. In contrast to the levels of significance for the other findings these results may leave one with an uneasy feeling. One problem with these tests is that an n=11 groups does not provide a very powerful test, but this problem is partially compensated for by the highly reliable group mean data on which the correlations are based. Two of the three significant correlations would have occurred by chance only one out a hundred times

and the third one only two out of a hundred times. With sixteen correlations one would not have expected one correlation to reach the .02 level on a chance basis. Moreover, the tests reported in Table 6 are two tailed because detailed predictions about which behaviors would be associated with which attitudes were not made in advance. Despite the lack of advance prediction the observed significant relationships are all in plausible directions in terms of the model's logic.

Since this original study the peer group-intergroup design has been employed in other settings with positive results (Alderfer, in preparation). In one case the design was employed on a much larger scale in a coeducational boarding school for American Indians. Peer group sessions were held separately for students, dorm counselors, and faculty members. Then the intergroup session was held for the entire school at one time. Out of this session grew a number of immediate changes and the implementation of a student-faculty group to manage change processes in the school.

Refinements and Additional Questions

There were a number of points in the data which bear on the detailed operation of the design. For exmmple, the attitudes of the top executives changed more after their family group discussions than after the intergroup discussions (2.00 vs. .58 on relevance; 1.75 vs. .86 on willingness to change). From one perspective one might argue that the family groups "did more" for the executives than the intergroups; they produced greater attitude change. At the same time, however, the executives

invested about 56 man hours in their family group sessions, while they invested about 17 man hours in the intergroup sessions. Viewed in terms of attitude change per top executive hour, the family group-intergroup comparison is different (.04 vs. .03 on relevance; .03 vs. .05 on willingness to change). Thus when the costs in executive time are balanced against the degree of change, the intergroup sessions were take no second place to the family group sessions.

The comparison of changes associated with different phases of the design assumes that movement at one part of the scale is roughly equivalent to movement at another part, but this is probably an invalid assumption. The consultant's impression is that the executives, despite their laborous family group sessions, would have left matters drop if the intergroup sessions had not been held.[1] One recurrent theme in the diagnosis was that data and recommendations for change frequently were given and not followed up by top management. Thus, not only were the intergroup sessions associated with about the same amount of attitude change per executive hour as the family group sessions, they sustained the data examination process and continued attitude change in directions conducive to organizational change.

While there were a number of important changes following from this process, it was also noted that one recommendation offered by the

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[1] It should also be noted that the questionnaire data were not examined at all until the project was completed.

consultant--namely to use laboratory education--was not taken. This choice was probably multiply-determined. The most dramatic reason was an event external to the system. On the day before the executives were to meet to decide how to proceed after the intergroup meetings, the Wall Street Journal carried a front page article that was highly critical of laboratory education. When the consultant learned of this from one of the executives he brought up the issue for group discussion after being sure that each executive had a copy of the Wall Street Journal article and an NTL publication addressing some commonly asked questions about laboratory education. The executives appreciated getting both points of view, but were unable to discuss the matters in any detail way with the consultant. Time and time again the men were unable to deal with conflictful matters very directly. The consultant was frequently seen as wishing to provoke conflict. Perhaps his being associated with the laboratory education recommendation and being somewhat controverisal was enough to limit his credibility in thinking through this recommendation.

Related to this specific issue is the more general problem of the transferential (and countertransferential) relationship in which the consultant participated during the diagnostic study. By age, education, physical appearance, and (perhaps) style the consultant was similar to the members of the management development program. Even though much of the diagnostic data was critical of this program, it is probably true that the executives unconsciously reacted to the consultant in ways similar to how they reacted to the younger managers. No matter how intelligent, well educated, and personable such people might be, they

were substantially less experienced than the executives and were a threat to the hard earned stability of the system.

It is also probably not an accident that the highest levels of mutuality (both high openness and high here-and-now behavior) occurred in the trainee group sessions. The consultant felt most at ease in these sessions, and noticed that he could more easily identify with the difficulties faced by these people than with many others in the system. Perhaps the executives sensed this facet of the relationship as well.

One of the key features of the intergroup phase of the design was the role played by the Personnel Vice President. He was paired with one of the top executives in each intergroup session, and his presence alone did much to add to the mutuality of the exchange. As a top ranking manager himself, he could (and did) talk directly to top managers when it appeared as though they weren't hearing what was being said to them. As the organization's chief spokesman for human needs he was typically seen by the lower ranking members of the system as their friend in court. He therefore occupied a key role in bridging the gap between the peer groups and the authority group during the intergroup phase of the feedback.

The present research offers the peer group-intergroup model as an additional approach to the family group method of feeding back diagnostic data to organizations. No attempt is made to argue that this design is better in general than the family group model, and this paper does not compare the two approaches empirically. Rather the approach here is to reason from a theoretical position pertaining to boundaries

and relationships that there are conditions when the peer group-intergroup design may be preferable to the family group design.

The stage is set for additional research comparing the outcomes of feedback using the family group model with those using the peer group-intergroup model under varying organizational conditions. The predictions are: The higher the level of mutuality in authority relations, the more effective the family group model. The lower the level of mutuality in authority relations, the more effective the peer group-intergroup model.

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